

Buchanania macrocarpa Lauterb. Bot. Jahrb. 56: 350. 1920.

NETHERLANDS NEW GUINEA: Bernhard Camp, Idenburg River, *Brass & Versteegh 13553*, April 1939, alt. 50 m., frequent in primary rain-forest on lower mountain slopes (tree 32 m. high, 48 cm. diameter; bark grey-brown with a little light resin; flowers yellow; fruit greenish brown). BRITISH NEW GUINEA: Palmer River, 2 miles below Black River Junction, *Brass 7342*, July 1936, alt. 100 m., plentiful in forests of river flood plains (large buttressed tree over 30 m.; bark brown, reddish when cut, crown sparse. A good floating timber very suitable for the construction of rafts).

Although we have only the original description for comparison, there seems little doubt that *Brass & Versteegh 13553* belongs to this species. In the material from British New Guinea the lower surface of the leaves is \pm minutely pubescent; the fruit (perhaps not yet full grown) is only about 15 mm. diameter; nevertheless, at present, the collection seems better placed here than elsewhere.

Buchanania solomonensis sp. nov.

Arbor usque 20 m. alta; ramulis atro-fuscis, innovationibus adpresse pubescentibus, mox glabratis; foliis glabris coriaceis, inconspicue reticulatis, petiolatis petiolo 4–5 cm. longo basi crassiusculo, elongato-oblongatis vel lanceolatis, 16–35 cm. longis, 5–11 cm. latis, basim versus cuneatim angustatis, breviter decurrentibus, apice breviter acuminatis, margine integris ac leviter revolutis; venis primariis utrinsecus 17–27, supra distinctis, subtus prominentibus, patentibus, \pm parallelis, prope marginem sursum versis, secundariis inconspicue manifestis; paniculis subterminalibus atque axillaribus, in fructu 15–30 cm. longis, \pm pubescentibus vel glabratis; floribus sessilibus vel subsessilibus; calycis segmentis rotundatis, 0.6–0.8 mm. longis; petalis oblongis, 2.5–3 mm. longis; disco 1.5–2 mm. longo; filamentis subulatis, antheris sagittatis 0.8 mm. longis, lobis basalibus quam loculis brevioribus; carpellis 5, sterilibus 2 mm. longis, gynoecio minute piloso; drupis lentiformibus, \pm 1.2 cm. diametro, lateraliter compressis, glabratis, apiculo centrico, in sicco scrobiculato-rugosis.

SOLOMON ISLANDS: Bougainville Island: Kugumaru, Buin, *Kajewski 1873* (TYPE), June 1930, alt. 150 m., common in rain-forest (medium sized tree up to 15 m. high; fruit shining black when ripe, flattened, 1.2 cm. long and broad, 5 mm. thick); Koniguru, Buin, *Kajewski 2123*, August 1930, alt. 1200 m., common in rain-forest (large tree up to 20 m. high, growing in the better forest areas; fruit green suffused with pink near the end, 1.3 cm. long, 1.1 cm. broad, 8 mm.

thick). San Cristobal Island: Magoha River, *Brass* 2745, August 1932, riverine rain-forest, common in lowlands (stiffly branched tree 10 m. tall; branches purple-brown; leaves very dark, smooth and shining, pale beneath; fruit purple).

In foliar characters, the species is much like *Buchanania mangoides* F. v. Mueller and *B. novo-hibernica* Lauterb. In the latter, the gynoecium is glabrous, in *B. solomonensis* it is pubescent. The floral description was drawn up from the remnants of a flower found attached to one of the fruits. One complete anther was found, in this the basal lobes were about $\frac{1}{3}$ the length of the anther or $\frac{1}{2}$ the length of the locules, also the pubescence of the gynoecium is short: these two characters distinguish our species from *B. mangoides* F. v. Muell.

***Buchanania Versteeghii* sp. nov.**

Arbor circiter 29 m. alta; ramulis atro-fuscis; foliis coriaceis, petiolatis petiolo circiter 1.5 cm. longo basi paullo incrassato, obovatis, 7–12 cm. longis, ultra medium 3.5–5 cm. latis, basi cuneatis, apice breviter atque interdum oblique acuminatis, margine integro undulato revoluto, utrinque glabris vel subtus costa venisque consperse pilosis; venis primariis utrinsecus 9–16 patentibus deinde subabrupte ad marginem incurvantibus, prominentibus, secundariis a primariis oblique abeuntibus, supra inconspicuis, subtus manifestis; paniculis subterminalibus 9–16 cm. longis fusco-tomentulosis, bracteis subulatis 5 mm. longis deciduis; floribus breviter pedicellatis; calyce glabro, lobis oblongis circiter 0.6 mm. longis; petalis ovatis 2.5 mm. longis (in floribus visis valde recurvatis); filamentis 1 mm. longis subulatis, antheris 0.6 mm. longis sagittatis, lobulis thecarum vix productis; disco urceolato 0.4 mm. longo \pm sulcato; carpellis 5, gynoecio strigoso-piloso; drupis immaturis 6–8 mm. diametro subglobosis, lateraliter compressis, apiculo centrico.

NETHERLANDS NEW GUINEA: 4 km. southwest of Bernhard Camp, Idenburg River, *Brass & Versteegh* 13161 (TYPE), March 1939, alt. 800 m., occasional in primary rain-forest on flood plain (tree 29 m. high, 60 cm. diameter; bark black; flowers yellow-green; fruit green).

Among Papuan species of *Buchanania*, this suggests *B. montana* Lauterb. in foliar characters, but it is readily distinguished from the latter by the subtomentose inflorescence. Lauterbach carefully pointed out that *B. montana* Lauterb. is a tree of the mossy forest. *B. Versteeghii* is found in the rain-forest.

***Buchanania heterophylla* K. Schum. var. *pubescens* var. nov.**

A forma typica recedit foliis subtus praecipue costa venisque consperse pubescentibus.

BRITISH NEW GUINEA: Lower Fly River, east bank opposite Sturt Island, *Brass 8044* (TYPE), October 1936, rain-forest, restricted to the flood-plains (large canopy tree; stem cylindrical; bark thick, brown, exfoliating in small hard scales and exuding a clear brown resin when cut; leaves clustered at ends of branches; fruit red).

Except for the scattered pubescence remaining in the lower surface of the leaves, this collection compares favorably with that of *Brass 1636* from the Lower Mori River; in the latter, however, the leaves are entirely glabrous. The short-acuminate leaves of *Brass 8044* are up to 55 cm. long and 16 cm. broad.

Mangifera Linnaeus

Mangifera minor Blume Mus. Bot. Lugd.-Bat. **1**: 198. 1850; Lauterb. Bot. Jahrb. **56**: 353. 1920; C. T. White, Proc. Roy. Soc. Queensl. **34**: 40. 1922; Lane-Poole Rept. For. Res. Papua 107. 1925; White & Francis, Proc. Roy. Soc. Queensl. **38**: 237. 1927; C. T. White, Jour. Arnold Arb. **10**: 234. 1929; Kaneh. Jour. Dept. Agric. Kyushu Univ. **4**: 355. 1935.

SOLOMON ISLANDS: Bougainville Island: Kugumaru, Buin, *Kajewski 1930*, July 1930, alt. 150 m., common in rain-forest; Koniguru, Buin, *Kajewski 2157*, July 1930, alt. 600 m., common in rain-forest.

This species has been reported from New Guinea, the Bismarck Archipelago, Micronesia and Polynesia, but apparently not before from the Solomon Islands.

? **Mangifera inoarpoides** sp. nov.

Arbor 12 m. alta glabra; foliis subcoriaceis subnitidis, utrinque prominule reticulatis, oblongo-lanceolatis vel oblongis, 19–24 cm. longis, 4.5–7.5 cm. latis, basi cuneatis, apice acutis ac apiculatis; venis primariis utrinsecus \pm 25, patentibus, marginem versus arcuatis; petiolo 3.5–4.5 cm. longo; inflorescentiis terminalibus 18 cm. longis, parce ramosis; fructibus subrotundis, valde compressis, paullo obliquis, non apiculatis, 6 cm. longis, 6.5 cm. latis, 4 cm. crassis; pericarpio 3–4 mm. crasso fibroso, endocarpio membranaceo; semine oblique reniformi vel oblongo, compresso, infra hilum laterale abrupte angustato atque producto, hic embryone locato; testa rugosa chartacea; embryone parvo, cotyledonibus conferruminatis, valde ruminatis.

BRITISH NEW GUINEA: Western Division, Penzara, between Morehead and Wassi Kussa Rivers, *Brass 8462* (TYPE), December 1936,

plentiful in rain-forest fringing creeks (tree up to 12 m. high; fruit much compressed, 6–8 cm. diameter, 3.5–4 cm. thick).

This is a fruiting collection from which all the parts of the flowers have fallen, and the seed is well developed. The general outline of the fruit is that of *Inocarpus*, but we find neither the style-scar nor the characteristic ridge found on the fruit of this leguminous genus. Yet, it must be admitted that the cotyledons of *Mangifera* L. are smooth and uniform in consistency. On the contrary, when the seed of this species is cut into two parts, the cotyledons are marked more or less regularly with narrow streaks. We have not found any comment on the occurrence of this ruminant character in the genus *Mangifera* L. Possibly when flowers are available some other generic disposition of this species may be indicated.

Spondias Linnaeus

Although we have no range-extensions to record in *Spondias* L., we simply note that the genus is represented in Papuasias by two species, *S. dulcis* Forst. and *S. pinnata* (L. f.) Kurz. The latter species is listed by previous students of the Papuan flora as *S. mangifera* Willd. As a matter of fact both names appear in the literature of Indo-Malaysia; it may be of interest to point out that both are based on *Mangifera pinnata* Koen. & Linn. f. Suppl. 156. 1781. Kurz's use of the earliest specific epithet validates his combination.

Camptosperma Thwaites

In studying the genus *Camptosperma* Thwaites, we find that *C. philippinensis* Merr. (*Wenzel 3199*, from Surigao) appears to be *Buchanania nitida* Engler. *Camptosperma* Thwaites, at present, is not known to occur in the Philippine Islands or Java, although it is to be looked for. The genus ranges from the Malay Peninsula, Penang, Sumatra, and Borneo to New Guinea and the Caroline Islands, and is here recorded for the first time from the Solomon Islands.

Camptosperma montana Lauterb. Bot. Jahrb. 56: 359. 1920.

NETHERLANDS NEW GUINEA: 6 km. southwest of Bernhard Camp, Idenburg River, *Brass & Versteegh 12541*, February 1939, alt. 1200 m., common on slopes in the rain-forest (tree 27 m. high; flowers yellow; fruit dark red); 4 km. southwest of Bernhard Camp, Idenburg River, *Brass & Versteegh 13131*, March 1939, alt. 900 m., common in *Agathis* forest (tree 25 m. high, 49 cm. diameter; bark brown; resin colorless; flowers light yellow; fruit green); *Brass & Versteegh 13145*, alt. 900 m.,

common in mossy forest (tree 20 m. high; bark brown, scaly; flowers yellow; fruit black); *Brass* 13338, alt. 900 m., occasional in *Agathis* forest (subsidiary tree 20 m. high; flowers green). BRITISH NEW GUINEA: Palmer River, 2 miles below Black River Junction, *Brass* 7091, 7130, 7169, June 1936, alt. 100 m., abundant in canopy layer of ridge forests (spur-buttressed tree up to 30 m. high; bark grey, somewhat flaky, lenticellate; leaves clustered at the apex of the branchlets; flowers green; fruit smooth, green, immature, \pm 1.2 cm. diameter).

We have found only minor differences in these collections from various altitudes and possibly habitats. In the plants of low altitude the pubescence tends to be more obviously stellate-lepidote, the leaves are practically all retuse or rounded at the apex, and perhaps a little more decurrent down the petiole; these are only minor variations. We believe the cited collections represent a single species.

Camptosperma macrophylla (Blume) Hook. f. Fl. Brit. Ind. **2**: 41. 1876; Engler in DC. Monog. Phan. **4**: 316. 1883; Lauterb. Bot. Jahrb. **56**: 359. 1920; Corner, Gard. Bull. Straits Settl. **10**: 254. 1939.

Buchanania macrophylla Blume, Mus. Bot. Lugd.-Bat. **1**: 185. 1850; Scheffer, Ann. Jard. Bot. Buitenz. **1**: 17. 1876; F. v. Muell. Pap. Pl. **1**: 54. 1876.

BRITISH NEW GUINEA: Palmer River, 2 miles below Black River Junction, *Brass* 7117, June 1936, alt. 100 m., chief dominant of a special swamp-forest found on a broad plateau-like ridge (straight slender tree 30 m. tall, with small open crown of sparsely foliated semi-erect branches, and producing numerous slender-kneed pneumatophores from a few cm. to over 1 m. high; stem spur-buttressed or with prop-roots at the base; bark brown, lenticellate, vertically furrowed; leaves stiff, concave, shining above, brown pubescent beneath; flowers green; fruit immature); Gaima, Lower Fly River (east bank), *Brass* 8292, November 1936, forming pure open stands in reed swamps within rain-forests (erect tree 20 m. high; bark brown, hard, furrowed, pink when cut; wood pale pink; young leaves brown beneath; ripe fruit smooth, black, soft, fleshy, up to 18 mm. long, 16.5 mm. diameter).

This species has been reported from Papuasia only on the basis of a single sterile specimen (hence doubtfully determined) collected by Teysmann on the island of Méoswar in Geelvink Bay, according to Scheffer, F. v. Mueller, and Lauterbach. The two collections above cited show both ♀ flowers and fruit; consequently, there should be little question concerning their identity, if we have interpreted the descrip-

tions and herbarium specimens of *C. macrophylla* (Bl.) Hook. f. correctly. The leaves are a little smaller (11–18 cm. long, 7–9 cm. broad) with fewer primary veins (13–22). Although these collections seem clearly to be conspecific, it should be noted that, in one, the lower surface of the leaves is covered with stellate (or fasciculate) hairs, obvious to the eye, as well as with smaller stellate scales; in the other collection occasional stellate hairs are present on the leaves; the young ones, although covered closely with the brown stellate scales, have the longer indumentum only on the petioles.

Corner's work is the most recent treatment of the genus; unfortunately for us, he restricts his consideration to those species occurring in the Malay Peninsula.

Camnosperma auriculata (Bl.) Hook. f. Fl. Brit. Ind. **2**: 41. 1876; Engler in DC. Monog. Phan. **4**: 320. 1883; Corner, Gard. Bull. Straits Settl. **10**: 253. 1939.

Buchanania auriculata Blume Mus. Bot. Lugd.-Bat. **1**: 185. 1850.

NETHERLANDS NEW GUINEA: Bernhard Camp, Idenburg River, *Brass 13963*, April 1939, alt. 50–60 m., plentiful in rain-forests on higher levels of flooded plains and on moist alluvial flats not subject to inundation (large prominently buttressed tree 30–50 m. high; flowers green. The soft, not very durable wood was used by the expedition for making canoes). Previously collected in the Malay Peninsula, Sumatra, and Borneo.

Camnosperma Brassii sp. nov.

Arbor magna; innovationibus dense stellato-pubescentibus; foliis chartaceis vel tenuiter coriaceis, subsessilibus, petiolo vix 1 cm. longo auriculato, auriculis inconspicuis, 5 mm. diametro, \pm rotundatis, dense stellato-pubescentibus, lamina oblanceolata, 15–40 cm. longa, 6–12 cm. lata, in parte inferiore deorsum gradatim elongato-angustata, basi supra auriculis rotundata, apice rotundata, margine integra, supra glabra, crebre manifeste reticulata, subtus praecipue venis venulisque \pm minute stellato-pilosa; venis primariis utrinsecus 20–26, utrinque prominulis, late patentibus, parallelis, propè marginem sursum versis; paniculis axillaribus 15 cm. (in fructu 35 cm.) longis, dense et minute stellato-pilosis, ramulis inferioribus usque 7 cm. longis, bracteis ovatis acutis; floribus $\text{\textcircled{f}}$ breviter pedicellatis tetrameris; calycis segmentis stellato-pubescentibus late ovatis, acutiusculis, circiter 0.5 mm. longis; petalis glabris ovatis 1 mm. longis obtusis; disco glabro crasso; staminibus 0.6 mm. longis, antheris parvis; ovario obtuse conico, in parte inferiore stellato-pubescente, stigmatibus \pm distincte lobatis; drupis ovoideis 5 mm. longis 4 mm. diametro glabris.

SOLOMON ISLANDS: Y s a b e l I s l a n d: Garona, *Brass* 3355 (TYPE), December 1932, riverine rain-forests, common in lowlands (tall spreading tree attaining a large size; old trees with flange buttresses and rough bark; branches leaf-scarred; leaves densely clustered at ends of branches, upper surface shining, lower brown, nerves on upper side very pale; flowers greenish; fruit smooth, brown, glandular-dotted, flesh oily; sap oily; one of the most conspicuous lowland trees).

This species differs from *Camptosperma macrophylla* (Blume) Hook. f., the other known pubescent Malaysian species, in that the leaves are almost sessile and auricled. The petals are glabrous, the disk is thicker, the ovary is sparsely pubescent, and the fruit is much smaller. The lamina of the leaf is 5 mm. wide on either side of the midrib in the lower part, which corresponds to the winged petiole in *C. auriculata* (Bl.) Hook. f., a species with glabrous leaves. Apparently this is the first collection of the genus in the Solomon Islands.

Rhus Linnaeus

Rhus taitensis Guillem. Ann. Sci. Nat. Bot. II. 7: 361. 1837; A. Gray, Bot. U. S. Expl. Exped. 368. 1854; Merr. Enum. Philip. Fl. Pl. 2: 473. 1923; Kaneh. Fl. Micrones. 185. f. 76. 1933; Christophersen, Bishop Mus. Bull. 128: 127. 1935.

Rhus rufa Teysm. & Binn. Nat. Tijdschr. 27: 52. 1863.

Rhus panaciformis F. v. Muell. Fragm. Phytogr. Austr. 7: 22. 1869-71.

Rhus retusa Zoll. ex Engl. in DC. Monog. Phan. 450. 1883, and β *Blumei* Engler l.c.

Rhus Engleriana Warb. Bot. Jahrb. 13: 363. 1891.

Rhus retusa var. *rufa* Koorders & Valetton, Meded. Lands Plant. 19: 412. 1898.

NETHERLANDS NEW GUINEA: 4 km. southwest of Bernhard Camp, Idenburg River, *Brass* 13726, March 1939, alt. 850 m., rain-forest, common in older seral growths on river banks (tree \pm 15 m. high, 20 cm. diameter); Bernhard Camp, Idenburg River, *Brass & Versteegh* 14123, May 1939, alt. 70 m., in primary forest of flood plain (tree 24 m. high, 44 cm. diameter; bark grey-brown with some white sap; wood reddish brown). BRITISH NEW GUINEA: Central Division, Laloki River, Rona, *Brass* 3674, March 1933, alt. 450 m., plentiful in borders of rain-forests and in light gully forests (erect tree up to 15 m. high, with stiffly spreading branches; bark pale grey-brown, slightly fissured and flaky; sap milky; flowers white); Eastern Division, Lower Mori River, *Brass* 1577, May 1926 (tree 40-50 feet, with pale close grey bark; flowers white; fruit glossy black, slightly viscid). NORTHEASTERN NEW GUINEA: Sattelberg, *Clemens* 1946, March 1936, alt. \pm 900 m. SOLOMON ISLANDS:

Bougainville Island: Kugumaru, Buin, *Kajewski 1844*, June 1930, alt. 150 m., rain-forest (large tree up to 20 m. high; fruits black, 5 mm. long, 3 mm. diameter, in numerous spreading panicles). Guadalcanal Island: Uulolo, near Tutuve Mountain, *Kajewski 2494*, April 1931, alt. 1200 m., rain-forest (a large tree of the higher altitudes, up to 20 m. high, with spreading crown and short trunk; bark grey-brown, with small irregular furrows; sap milky; flowers white, faintly scented). N'Gela Island (Florida Island): northern end of island, *Brass 3504*, January 1933, alt. 100 m., rain-forest slopes (handsome tree with spreading crown; bark pale grey, brittle, slightly suberose, pink when cut; latex copious; flowers white). San Cristobal Island: Waumamura, *Brass 2845*, September 1932, lowland rain-forests (spreading tree 25 m. high; bark grey, peeling in thin flakes; sap milky; flowers white).

In addition to the above material from Papuasia, we have at hand an isotype of *Rhus Engleriana* Warb. from the Key Islands, a collection from Java, one from the Celebes, four from the Philippine Islands, one from Queensland, one from the New Hebrides, two from Tahiti, and four from Samoa. These, we believe, represent a single wide-ranging species. The collections differ chiefly in the amount of pubescence on the lower surface of the leaves; this is so variable in quantity that it does not seem as if it could be a character of any great value. Lauterbach, Bot. Jahrb. **56**: 363. 1920, in his comment on β . *Blumei* Engl. points out that the specimens from New Guinea are glabrous; nevertheless, *Melanococca tomentosa* Blume, Mus. Bot. Lugd.-Bat. **1**: 236. 1850, the basis of *Rhus retusa* β *Blumei* Engl., is described as subochraceous-tomentose on the branches, petioles, rhachis of leaves, and peduncles. From the collections at hand, we infer that the pubescence of the leaves is a more or less transitory feature. The species passed for a time as *Rhus rufa* Teysm. & Binn., but, following Engler, later workers took up *R. retusa*, apparently a manuscript-name of Zollinger. As far as we know, *R. rufa* Teysm. & Binn. is the earlier published name of the two; but, since the material does not appear to be separable from the Polynesian collections representing *R. taitensis* Guillem., there is no question of priority of names.

Semecarpus Linnaeus f.

Semecarpus magnifica K. Schum. Fl. Kais. Wilhelmsl. 65. 1889; K. Schum. & Lauterb. Fl. Deutsch. Schutzgeb. Südsee 411. 1900; Lauterb. Nov. Guin. **8**: 299. 1910, l.c. **8**: 830. 1912, Bot. Jahrb. **56**: 368, f. 5. 1920.

BRITISH NEW GUINEA: Fly River, 528 mile Camp, *Brass 6792*, May

1936, alt. 80 m., common in forest undergrowth on flooded river banks as well as on the ridges; Palmer River, 2 miles below Black River Junction, *Brass 7304*, July 1936, alt. 100 m., common in forest undergrowth on flood plains and lower ridges; Central Division, Ononge Road, Dieni, *Brass 3943*, April–May 1933, alt. 500 m., rain-forest; Ihu, Vailala River, *Brass 974*, rain-forest. The field notes are here summarized: small slender usually unbranched tree 5–6 m. tall, with a crown of very large oblanceolate leaves (in one number, two whorls 10 cm. apart); panicles several, scattered along the stem, flowers flat, small, white; numerous brown pubescent fruits. The pubescence is somewhat variable, *Brass 3943* being practically glabrous. Not previously reported from British New Guinea.

Semecarpus fulvo-villosa Lauterb. Bot. Jahrb. **56**: 371. 1920.

BRITISH NEW GUINEA: Palmer River, 2 miles below Black River Junction, *Brass 7271*, July 1936, alt. 100 m., forest undergrowth of lower ridges (sparse slender tree 3–4 m. high; leaves stiff, grey below, flowers cream-colored); Lake Daviumbu, Middle Fly River, *Brass 7461*, August 1936, contact zone of rain- and savanna-forest (tree 14 m. high, with pale brown corky deeply fissured bark exuding quantities of black resin when cut; leaves grey beneath).

In the original description based on the staminate plant, specimens are cited from Netherlands New Guinea, Northeastern New Guinea, and the Bismarck Archipelago. The above cited collections seem to fit this species reasonably well, the first is in flower (♂), the second in fruit. Inflorescence axis 29 cm. long; branches 1–7 cm. long; dried drupes compressed, transversely and somewhat obliquely ellipsoid, 2 cm. long, 2.5 cm. broad, slightly keeled, golden brown velutinous, closely and very shallowly sulcate from base to apex, apex a little excentric, not beaked; hypocarp also golden brown velvety, turbinate, 6 mm. long, deeply sulcate when dry.

Semecarpus rostrata Valetton, Bull. Dept. Agric. Ind. Néerl. **10**: 29. 1907, Ic. Bogor. **3**: 151, *t.* 259. 1908, Lauterb. Nov. Guin. **8**: 299. 1910, l. c. **8**: 830. 1912, Bot. Jahrb. **56**: 367. 1920.

BRITISH NEW GUINEA: Fly River, 528 mile Camp, *Brass 6788*, May 1936, alt. 80 m., occasional in forest undergrowth on muddy flood banks of river (shrub 1–1.5 m. high; leaves stiff, pale beneath; inflorescence racemose, terminal; fruit \pm 5 cm. long, apical portion yellow, fleshy base green); Ihu, Vailala River, *Brass 963*, February 1926, common in rain-forests (small bush with terminal racemose inflorescence; fruit dull green, with much enlarged fleshy yellow base); Murua River, Gulf Division, *Brass 1334*, March 1926, rain-forests.

There is considerable variation in the leaf-outline; nevertheless, these collections agree fairly well with Valetton's description and plate of *Semecarpus rostrata*, a species previously known from Netherlands New Guinea.

***Semecarpus decipiens* sp. nov.**

Arbor 20 m. alta; ramulis glabris, novellis \pm angulatis vel sulcatis, innovationibus pubescentibus; foliis petiolatis petiolo 2–3.5 cm. longo glabro supra canaliculato, glabris, coriaceis, utrinque manifeste reticulatis, obovatis vel ellipticis vel lanceolatis, 11–23 cm. longis, 5–9 cm. latis, basi cuneatis atque breviter decurrentibus, apice abrupte ac plerumque anguste acuminatis, margine integris vix revolutis; venis primariis utrinsecus 14–18, supra manifestis, subtus prominentibus, late patenteadscendentibus prope marginem curvatis ac \pm anastomosantibus; paniculis terminalibus axillaribusque, plerumque quam foliis brevioribus, 10–20 cm. longis, minute pubescentibus, ramis subdivaricatis; floribus sessilibus, δ : alabastris 1.5 mm. longis pubescentibus; calycis segmentis 0.5 mm. longis subtriangularibus; petalis late lanceolatis subacutis 2 mm. longis; staminibus 2 mm. longis, antheris subcordatis; ovarii rudimento piloso; ♀ : calycis segmentis parvis; petalis elongato-ovatis acutis 2.5 mm. longis; staminibus quam petalis brevioribus, antheris parvis; disco dense pubescente; ovario depresso globoso dense piloso, stylis 3 divergentibus, stigmate bilobo; drupis lateraliter compressis, oblique ac transverse oblongis, 2 cm. longis, 2.5 cm. latis, apice breviter rostratis, rostra 4 mm. longa, consperse pubescentibus, hypocarpio 6 mm. longo \pm turbinato.

BRITISH NEW GUINEA: Sturt Island, Lower Fly River, *Brass 8194*, October 1936, flood plain rain-forest (profusely flowering tree attaining 30 m.; bark pale brown; leaves glaucous beneath; sap black; flowers green). SOLOMON ISLANDS: Bougainville Island: Kugumaru, Buin, *Kajewski 1985*, July 1930, alt. 150 m., common in rain-forest (tree up to 20 m. high), Karngu, Buin, *Kajewski 2252*, October 1930, alt. 50 m., common in rain-forest (tree up to 30 m. high). Guadalcanal Island: Uulolo, Tutuve Mountain, *Kajewski 2560*, April 1931, alt. 1200 m. (small tree up to 15 m. high; fruit green with hooked point at end, 2.5 cm. long, 2.6 cm. diameter. The sap of this tree is very caustic, burning the skin severely). San Cristobal Island: Waimamura, *Brass 2666* (TYPE), August 1932, common in coastal rain-forests (erect tree 20 m. tall; bark brown, lenticellate; leaves pale, stiff, slightly wrinkled, glaucous below; flowers white). Malaita Island: Quoimonapu, *Kajewski 2328*, December 1930,

alt. 50 m., rain-forest, common (medium sized tree up to 20 m. high; sap very caustic; flowers minute, petals cream-colored). **Y s a b e l I s l a n d**: Meringue, *Brass* 3167, November 1932, littoral rain-forest (large spreading tree with pale brown flaky bark; leaves very dull, grey beneath; flowers white); Garona, *Brass* 3358, December 1932, lowland rain-forests, common (tree 10 m. tall; bark pale brown, slightly scaly; leaves stiff, dull green, grey beneath; flowers pale yellow; fruit green; sap mucilaginous).

This species is closely allied to *Semecarpus laxiflora* K. Schum. and *S. uncata* Slis; but these have terminal inflorescences and somewhat different fruits. The fruits of *S. laxiflora* K. Schum. are described as subtomentose with golden hairs, and that of *S. uncata* Slis is pictured with a longer more curving beak than is found in the Solomon Island material.

***Semecarpus brachystachys* sp. nov.**

Arbor 25 m. alta; foliis chartaceis vel tenuiter coriaceis, petiolatis petiolo circiter 3 cm. longo minute pubescente, ellipticis, ad tertium superum paullo latioribus, 25–34 cm. longis, 12–15 cm. latis, basi rotundato-cuneatis vel breviter obtusis, apice rotundatis vel obtusis deinde abrupte acuminatis, margine integris undulatis leviter revolutis, supra glabris vel conspersissime et minute substellatis, crebre reticulatis, subtus glaucis, praecipue costa venisque minute pubescentibus (trichomatibus simplicibus atque substellatis); venis primariis utrinsecus circiter 22 \pm parallelis patentibus prope marginem subabrupte arcuatim anastomosantibus, supra manifestis, subtus prominulis, secundariis a primariis fere angulo recto abeuntibus, utrinque manifestis; paniculis terminalibus, in fructu circiter 10 cm. longis, ramis \pm pubescentibus; floribus non visis; drupis immaturis lateraliter compressis oblique obovatis, breviter rostellatis rostro excentrico, circiter 4 cm. longis, in parte latissima 3 cm. latis, minute substellato-pubescentibus, brunnescentibus, in sicco longitudinaliter sulcatis; hypocarpio obtuse obconico, circiter 1 cm. longo, 1.2 cm. lato.

SOLOMON ISLANDS: **S a n C r i s t o b a l**: Magoha River, *Brass* 2740 (TYPE), August 1932, river bank, common in lowlands (tree 25 m. tall with brown suberose slightly flaky bark; leaves dull green, grey beneath; fruit immature; sap turns black upon exposure to air).

The leaves somewhat resemble *Semecarpus Anacardium* L., but the inflorescence is much shorter and the fruit much larger. Perhaps among New Guinean species it approaches *S. hirtiflora* Ridley, the latter, however, has hirsute pubescence, a very short inflorescence and fruit about half the size of that of *S. solomonensis*.

Semecarpus Archboldiana sp. nov.

Arbor 21 m. alta; innovationibus pubescentibus; foliis \pm rigide coriaceis, utrinque reticulatis, petiolatis petiolo \pm 2.5 cm. longo basim versus \pm applanato, pubescente, obovato-ellipticis, 9–23 cm. longis, 4.5–11.5 cm. latis, basi late obtusis interdum subrotundatis, apice rotundatis deinde abrupte breviterque acuminatis, margine integris subundulatis, supra glabris interdum costa parce pubescente, subtus flavescens glaucis, secus costa venisque \pm pilosis; venis primariis utrinsecus 15–23 \pm parallelis patentibus, prope marginem arcuatim anastomosantibus, supra impressis, subtus prominentibus, secundariis a primariis fere angulo recto abeuntibus, subtus conspicuis; paniculis φ terminalibus \pm 16 cm. longis, interdum a basi ramosis, axi crasso ramisque brevissime tomentosus; floribus non visis, breviter pedicellatis vel sessilibus; drupis 1.5–2 cm. longis, 3–5 cm. latis, 3 cm. crassis, apice profunde depressis, sublobatis, uno latere subcarinatis, \pm minute tomentosus, hypocarpio obtuse obconico, 1 cm. longo, 2 cm. lato, longitudinaliter subsulcato, minute tomentosus.

NETHERLANDS NEW GUINEA: 6 km. southwest of Bernhard Camp, Idenburg River, *Brass & Versteegh 12590* (TYPE), February 1939, alt. 1230 m., rare in primary rain-forest on ridge (tree 21 m. high, 42 cm. diameter; bark 15 mm. thick, scaly, black, with some black sap; fruits green).

The alliance of this species is unquestionably with those Philippine and Polynesian species, *S. philippinensis* Engl. and *S. vitiensis* Engl., at one time placed in *Oncocarpus* A. Gray. Although the depressed and somewhat knobby sinuate drupes are readily distinguishable from the laterally compressed ones of *Semecarpus* L. f. proper, nevertheless, from the available material examined, we are inclined to agree that the two are not separable on strong generic characters, but might well represent distinct sections. Probably *S. venenosa* Volkens of Micronesia belongs to this same group.

CORYNOCARPACEAE

Corynocarpus J. R. & G. Forster

Corynocarpus australasica C. T. White, *Contr. Arnold Arb.* 4: 57, *pl.* 5. 1933; Van Steenis, *Bull. Jard. Bot. Buitenz.* III. 13: 101 *f.* 1. 1933.

NETHERLANDS NEW GUINEA: 6 km. southwest of Bernhard Camp, Idenburg River, *Brass & Versteegh 13101*, March 1939, alt. 1220 m., rare tree in primary forest (bark black, scaly, rough; wood yellow-

brown). BRITISH NEW GUINEA: Lake Daviumbu, Middle Fly River, *Brass* 7713, September 1936, rain-forest substage (tree 12 m. high; leaf-nerves prominent below; immature fruit smooth, globose, \pm 4 cm. diameter).

The species is known from three previous collections, two from Queensland, and one from Netherlands New Guinea (southern part) cultivated in the Botanic Gardens at Buitenzorg. This material seems to match the type fairly well as to foliar characters and fruit, the floral parts have practically all fallen. Professor I. W. Bailey and Mr. Richard Howard very kindly sectioned twigs for us and compared the structure of the wood with that of prepared material of *Corynocarpus*.

ARNOLD ARBORETUM,
HARVARD UNIVERSITY.

OBSERVATIONS ON OLD WORLD SPECIES OF TURPINIA VENTENAT

E. D. MERRILL AND L. M. PERRY

SINCE we have found no records of the occurrence of species of *Turpinia* Vent. in Papuasia, we were obliged to begin with the Indo-Malaysian collections as a starting point in the identification of the nine New Guinean numbers at hand. The species are readily separated into two categories, one with simple leaves, the other with compound ones. The first, consisting of *T. arguta* Seem. with much larger flowers than the other species, *T. formosana* Nakai, *T. indochinensis* Merr., *T. simplicifolia* Merr., and *T. unifoliata* Merr. & Chun, has received no consideration, as all our strictly simple-leaved specimens have been named. Approximately 20 binomials have been proposed for the compound-leaved species. A few have been credited with a wide geographical range, while others are as yet restricted to limited areas. In addition to considerable unnamed material in the herbarium, there is so much variation in the named collections that it has seemed necessary to try to find some stable specific characters. This has been no easy task. Species are difficult to delimit, some currently recognized ones at times passing almost imperceptibly into closely related forms. Craib, Fl. Siam. Enum. 1: 339. 1926, commenting on his *T. parviflora*, said "this species, *T. parva*, and *T. nepalensis* are very closely allied and require further study in the field." Probably the only satisfactory study of the genus lies in the correlative observation of living and herbarium material. This, of course, is out of the question for us; further, we are handicapped by the lack of types. Nevertheless, we venture to set forth a summary of the compound-leaved species in the hope that it may be useful to others because of the widely scattered literature appertaining to the genus.

In the Indo-Malaysian material the stipels of the leaflets are separate. In the collections from New Guinea, the two stipels of the pairs of opposite leaflets are united into one and bent backward toward the proximal end of the leaf in such a way as to cover at the point of insertion the shallow channel of the rachis lying between the insertion of the leaflets. As to the other foliar characters, differences are evident in the leaf-texture, and also in the relatively even or obviously uneven